

## Comparison of the immune response of a PRRS MLV vaccine administered at 3 days or 3 weeks of age by different routes in piglets with neutralizing maternal antibodies

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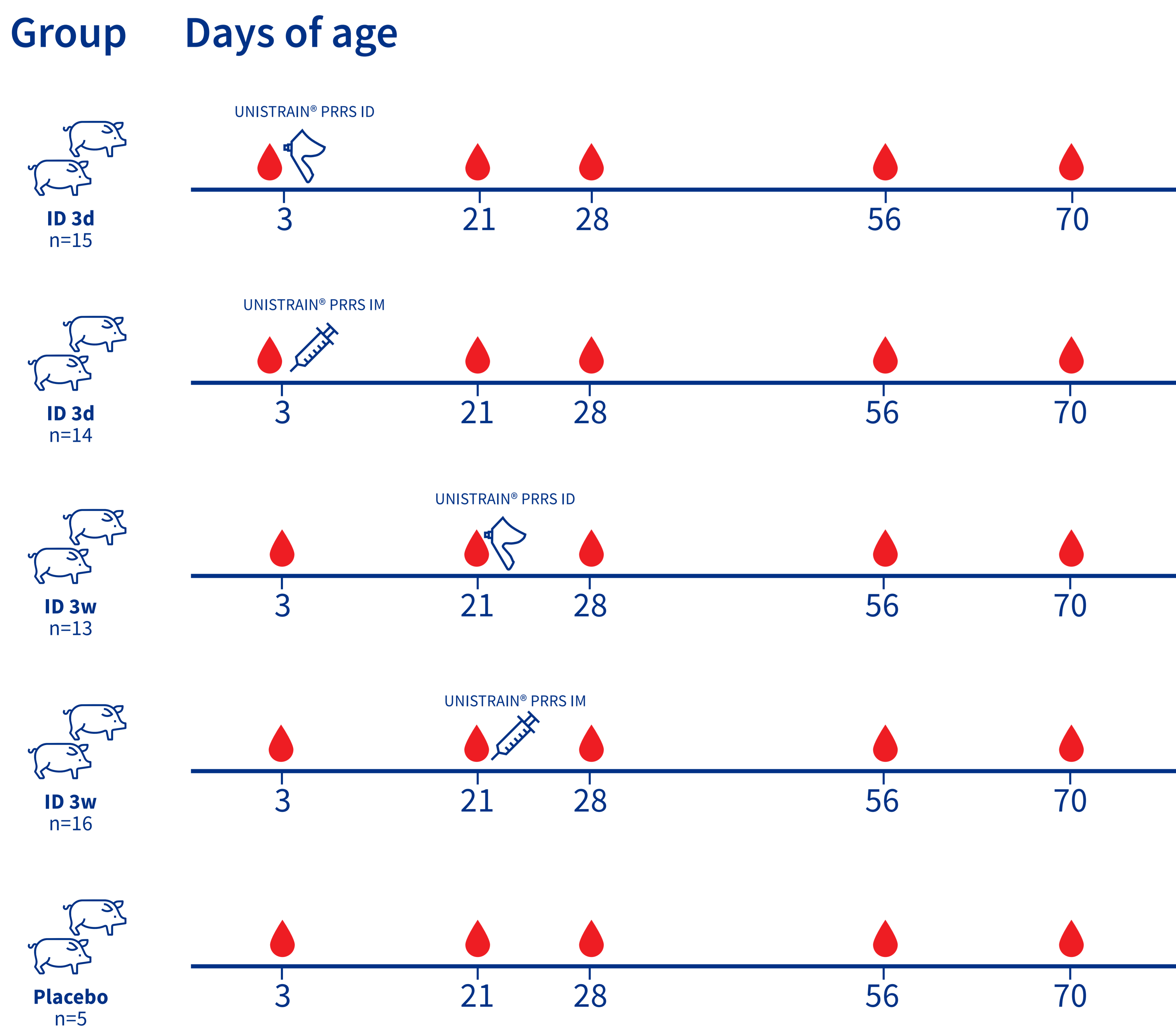
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### Background & Objectives

Vaccination of piglets against PRRSV is an increasing approach in breeder sites where infection persists in nurseries. However, maternal immunity might interfere with early vaccination. Some PRRS vaccines can be administered by the intradermal route, a less stressful alternative to the classical intramuscular vaccination.

The objective of the present study was to evaluate the immune response of UNISTRRAIN<sup>®</sup> PRRS administered intradermally or intramuscularly at 3 or 21 days of age in presence of neutralizing maternally derived antibodies.

### Materials & Methods



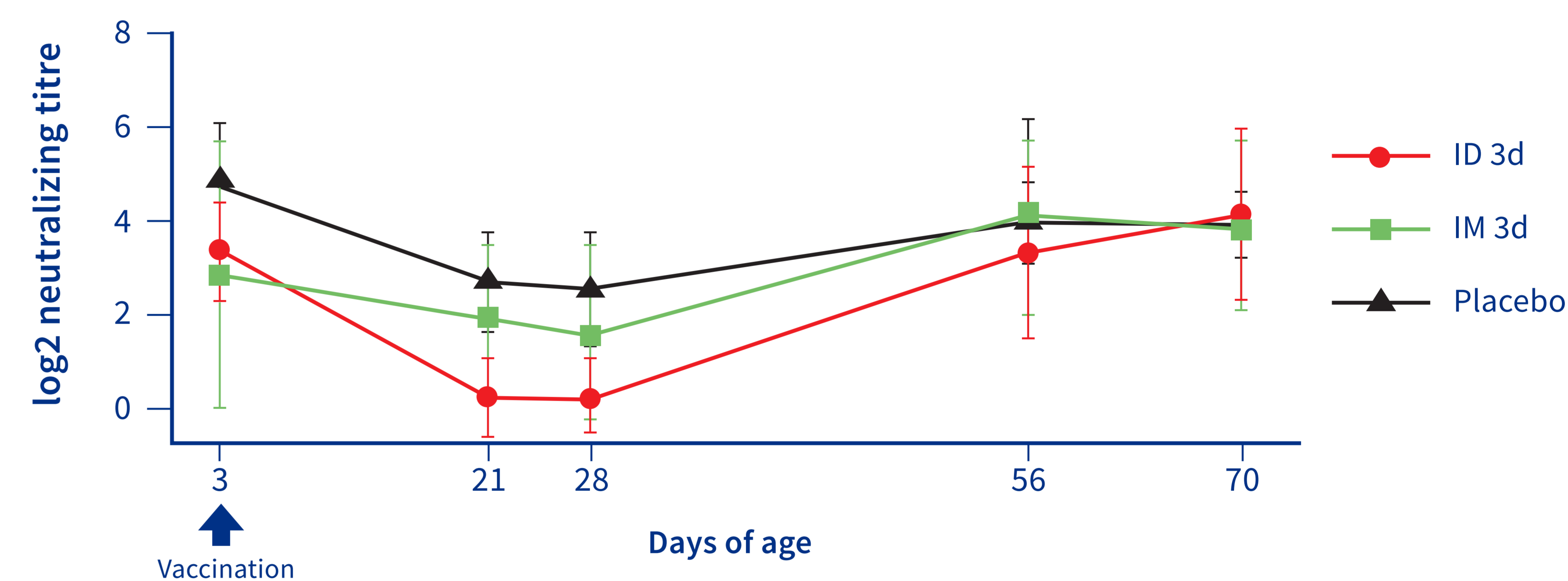
IM = intramuscular   
 ID = intradermal   
 Blood sampling for homologous viral neutralization test (VNT)

Sows were regularly vaccinated with UNISTRRAIN<sup>®</sup> PRRS

### Results

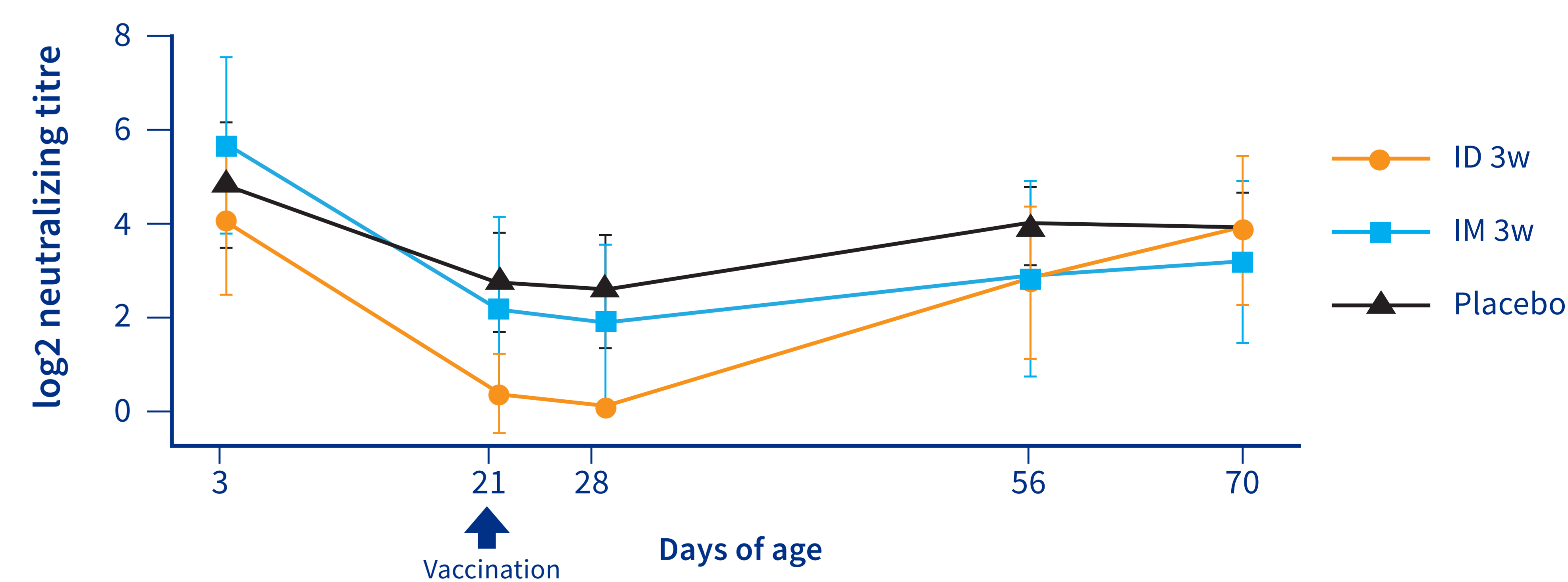
For animals vaccinated IM at 3 days of age, neutralizing antibodies developed from day 21 of age. At 56 days of age, most animals vaccinated at 3 days had VNT titers above 3 log<sub>2</sub>, with similar titers regardless of whether they received an IM or ID vaccine and remained so at 70 days of age (Fig.1)

Figure 1. Evolution of the virus neutralization titres in the groups vaccinated at 3 days of age and the placebo group. The vertical bars indicate the standard deviation.



Regarding animals vaccinated at 21 days of age, no differences in the development of antibodies were observed between the IM and ID groups, and by day 56 of age most animals had VNT titers of 3 log<sub>2</sub> or higher (Fig. 2). It should be considered that at 21 days of age (vaccination time) initial level of neutralizing maternally derived antibodies was not identical between groups.

Figure 2. Evolution of the virus neutralization titres in the groups vaccinated at 21 days of age and the placebo group. The vertical bars indicate the standard deviation.



### Discussion & Conclusion

In conclusion, IM and ID vaccination at 3 or 21 days of age did not show any significant difference. Regardless the route of vaccination of UNISTRRAIN<sup>®</sup> PRRS at 3 days of age in presence of neutralizing maternally derived antibodies produces significant titres of NA at 56 and 70 days of age. Further research is needed to complete the evaluation of the immune response after vaccination at 3 days and 3 weeks of age.